

III. Rejection of Claims 1 to 15 Under 35 U.S.C. § 102 (b)

Claims 1 to 15 were rejected under 35 U.S.C. § 102 (b) as anticipated by U.S. Patent No. 5,029,087 ("Cowan et al."). Applicants respectfully submit that Cowan et al. do not anticipate claims 1 to 15 for the following reasons.

Claim 1 relates to a method for operating a torque-converter lockup clutch for a hydrodynamic torque converter. Claim 1 recites that the slip of the torque converter is adjusted using a setpoint value, while the torque-converter lockup clutch is being closed. Claim 1 further recites that the setpoint value is continuously selected inside a closing interval as a function of time and taking into account the input torque currently applied to the torque converter.

Claim 11 relates to a control device for a torque-converter lockup clutch for a hydrodynamic torque converter. Claim 11 recites that a sensor for detecting the input torque applied to the torque converter is connected to a control unit. Claim 11 further recites that the control unit selects a setpoint value for the slip of the torque converter as a function of time and takes into consideration the input torque currently being applied to the torque converter.

Cowan et al. purportedly relate to a control for a hydrokinetic torque converter lockup clutch. Cowan et al. state that the controller minimizes slip error and determines slip error by comparing the actual slip to desired slip. Rapid torque changes are stated to result in "eventual compensation of duty cYcle [sic], but will allow rapid torque changes to be absorbed by short periods of increased slip, or decreased slip, as the case may be, without being felt by the driver." See col. 15, lines 47 to 53. The value for the desired slip is determined based upon the actual slip and a final target value and subtracting from the actual slip a percentage of the difference between the actual slip and the first target slip. Use of the above formula is stated to result in an exponentially decaying slip that approaches the final target. See col. 15, lines 53 to 59. Nowhere do Cowan et al. disclose, or even suggest, a control unit that selects a setpoint value for the slip of the torque converter as a function of time and taking into consideration the input torque currently being applied to the torque converter, as recited in independent claims 1 and 11. Further, nowhere do Cowan et al. disclose, or even suggest, the setpoint value being continuously selected inside a closing interval, as recited in claim 1. Therefore, Cowan et al. do not disclose all of the limitations of claims 1 and 11.

The Office Action refers to col. 4, lines 30 to 38 and alleges that Cowan et al. disclose that a "setpoint value being continuously selected inside a closing interval, as a function of time, and taking into account the input torque applied to the torque converter." Office Action at p. 2. Applicants respectfully disagree. The referenced section states that the controller calculates converter slip using engine RPM and turbine speed or transmission input shaft speed. The referenced section does not even mention input torque applied to the torque converter, let alone continuously selecting a setpoint value taking into account the input torque currently applied to the torque converter, as recited in claims 1 and 11.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of Calif.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). As more fully set forth above, it is respectfully submitted that Cowan et al. do not disclose, or even suggest, a control unit that selects a setpoint value for the slip of the torque converter as a function of time and taking into consideration the input torque currently being applied to the torque converter, as recited in independent claims 1 and 11. Further, nowhere do Cowan et al. disclose, or even suggest, the setpoint value being continuously selected inside a closing interval, as recited in claim 1. Therefore, it is respectfully submitted that Cowan et al. do not anticipate claims 1 and 11.

As for claims 2 to 10 which ultimately depend on claim 1 and therefore include all of the limitations of claim 1, Applicants respectfully submit that these claims are patentable for at least the same reasons provided above in support of the patentability of claim 1.

As for claims 12 to 15 which ultimately depend on claim 11 and therefore include all of the limitations of claim 11, Applicants respectfully submit that these claims are patentable for at least the same reasons provided above in support of the patentability of claim 11.

In summary, Applicants submit that claims 1 to 15 are patentable over Cowan et al. Therefore, withdrawal of the 35 U.S.C. §102(b) rejection and allowance of claims 1 to 15 is respectfully requested.

IV. New Claims 16 to 30

New claims 16 to 30 have been added herein. It is respectfully submitted that new claims 16 to 30 do not add any new matter and are fully supported by the present application, including the Specification. It is respectfully submitted that claims 16 to 30 are allowable.

V. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached page is captioned "**Version with Markings to Show Changes Made.**"

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Application Serial No. 09/976,788

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claim 7 has been amended without prejudice as follows:

7. (Twice Amended) The method as recited in Claim 4, where the slip to be used as a new initial value, as a basis for the applied input torque (E) is calculated from the applied input torque (E), taking a [the] performance figure of the torque converter (1) into consideration.

New claims 16 to 30 have been added.